Remote Sensing Applications Division (RSAD)

CDR Program Office

Weekly Report for Sep 5, 2014
Ed Kearns, Chief

CDR Program Office
OISST Rejuvenation Project

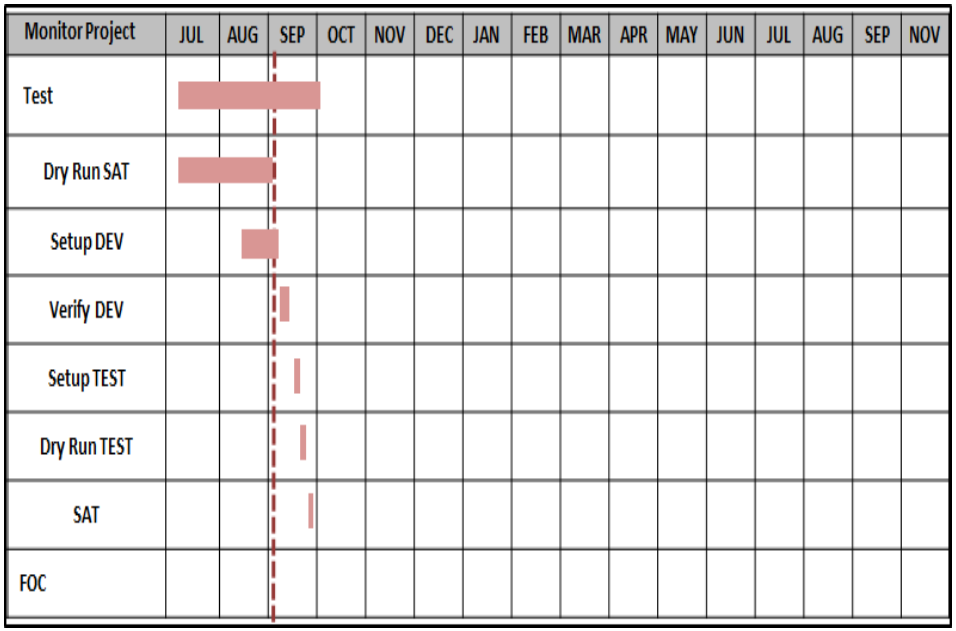
Team Lead:
Drew Saunders

Weekly Report – Sep 5, 2014

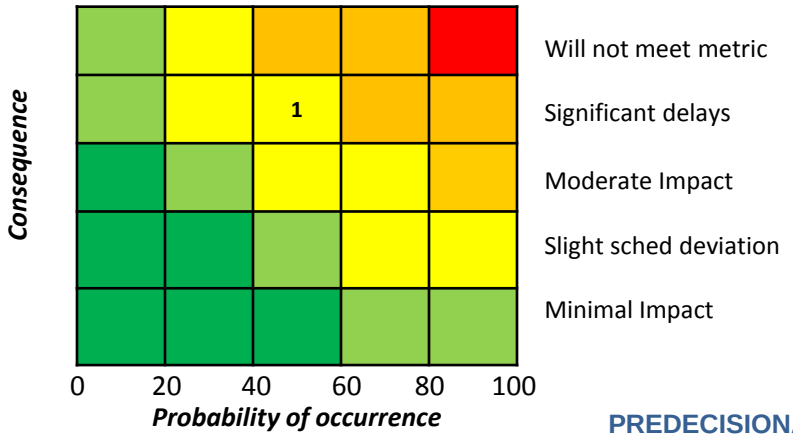
1 ISST – Optimum Interpolated Sea Surface Temperature

- **Creating a golden data set for the OISST final run.**
- **ITB is STILL working on creating the DEV container.**
- **Updating Project Plan with FOC estimates.**
- Performing dry runs for the System Acceptance Test (SAT).
- Draft OISST Transition to Operations Project Plan is being reviewed (ITB and OISST team).
- Successfully completed 30 day parallel test.
- Comparing NCDC GTS with NCEP ship/buoy data for use. GCAD is resolving issues but requires new operational code.
- AVHRR data for the 15 day delay product is available from CLASS.
- Running test data and code on Rainband for parallel test.
- GSTWG discussing inputs and production of preliminary OISST.
- Created a SOP for operational OISST.
- Completed refactoring of each component.
- Conducted Technology Assessment Review.

Operations:



Risk Matrix



Risk and Mitigation

1 Time to progress through the three tier environment. ITB support is required.

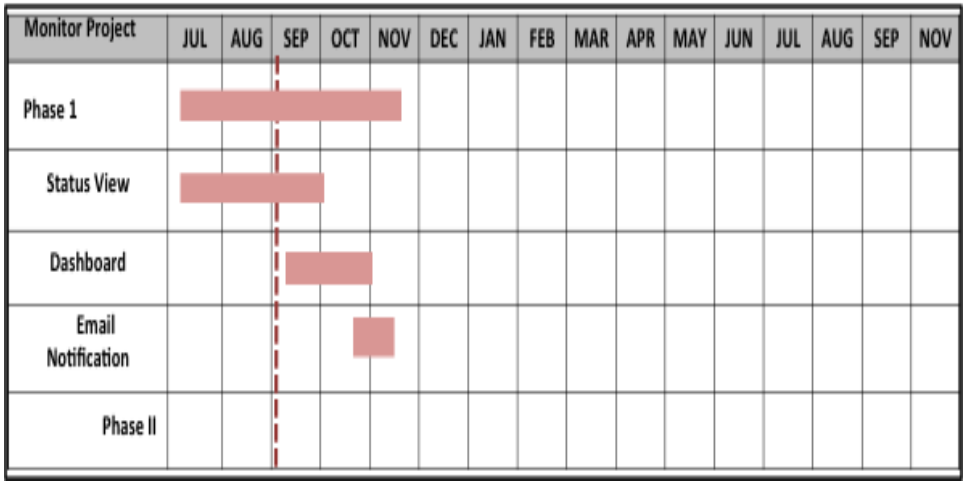
CDR Program Office
Ingest Monitoring Tool

Team Lead:
Linda Copley

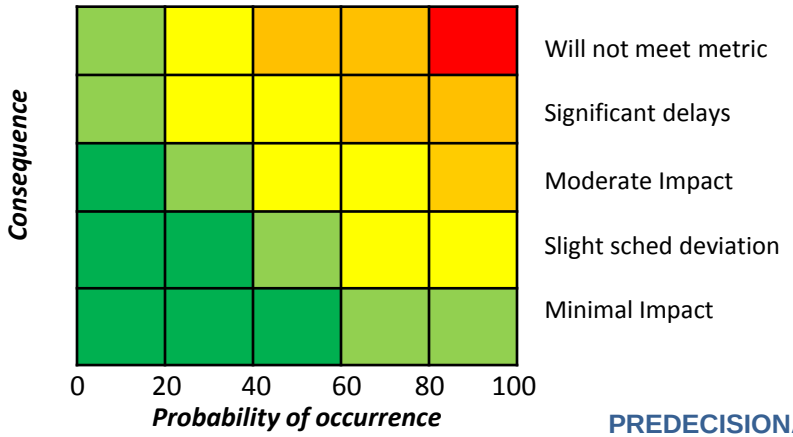
Weekly Report – September 5, 2014

1 Operations Monitoring Tool development

- **Designing module to collect status data from iRODS.**
- **Working on database design.**
- Defined requirements for Phase 1 of the project.
- Phase 1 implements basic functionality .
- Additional datasets can be added in later phases.
- Updated the monitoring project plan.
- Monitoring of operational ingest.



Risk Matrix



Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION

= On-track = Potential management action required = Management attention required

CDR Program Office

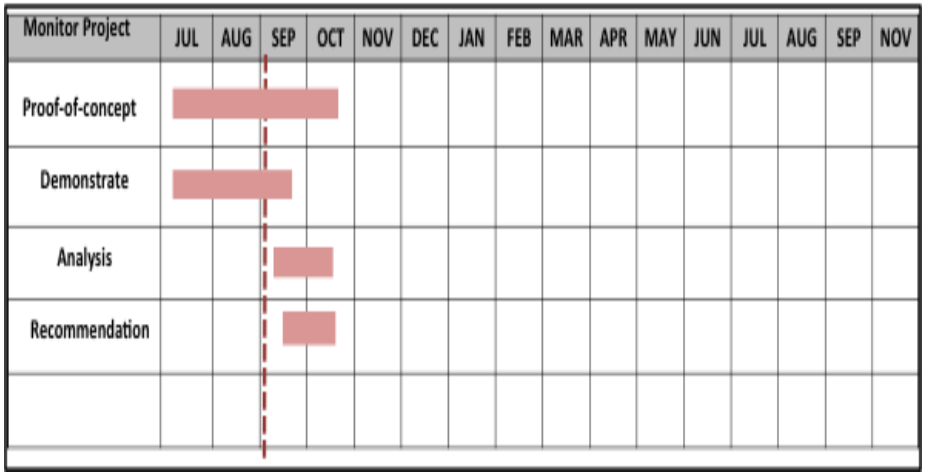
Federated Archive Search Tool (FAST)

Team Lead:
Linda Copley

Weekly Report – September 5, 2014

1 Federated Archive Search Tool proof-of-concept

- **Developing application to demonstrate query capabilities.**
- Connected all data to geographic and date references.
- Designed and loaded VIIRS catalog graph data.
- Designed and loaded Storm Events graph data.
- Designed and loaded Storm Events graph data.
- Loaded FIPS geographic data.
- Installed Neo4j graph database with spatial extension.



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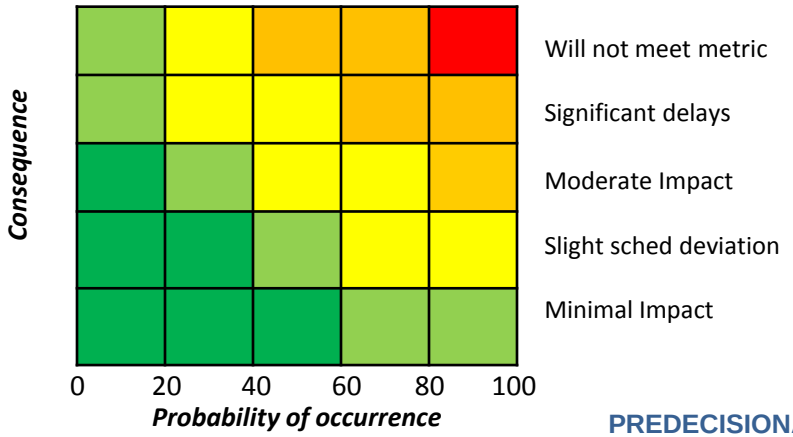

Risk and Mitigation

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CDR Program Office
Reprocessing VIIRS SDRs

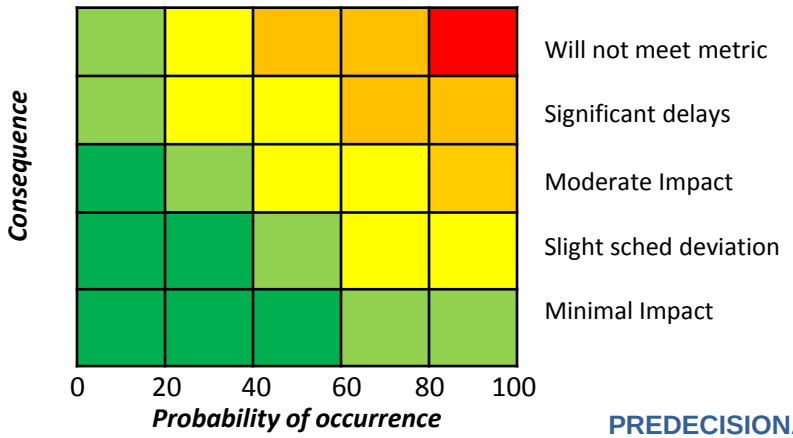
Team Lead:
Jim Biard

Weekly Report – September 5, 2014

1 Operations Monitoring Tool development

- **Contacted STAR scientist (Changyong Cao) to help identify possible parrallelization capability of VIIRS algorithms.**
- **Project Plan has been reviewed and comments submitted.**
- Developed draft white paper to identify issues and scope.
- Have identified parts of the algorithm that need to 'conditioned' during runtime and will affect reprocessing estimates.
- Discussed scope and goals of the project with CDRP scientist.

Risk Matrix



Risk and Mitigation

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CDR Program Office

NOAA NEXRAD Reanalysis

Project Manager:
B. Nelson

Weekly Report

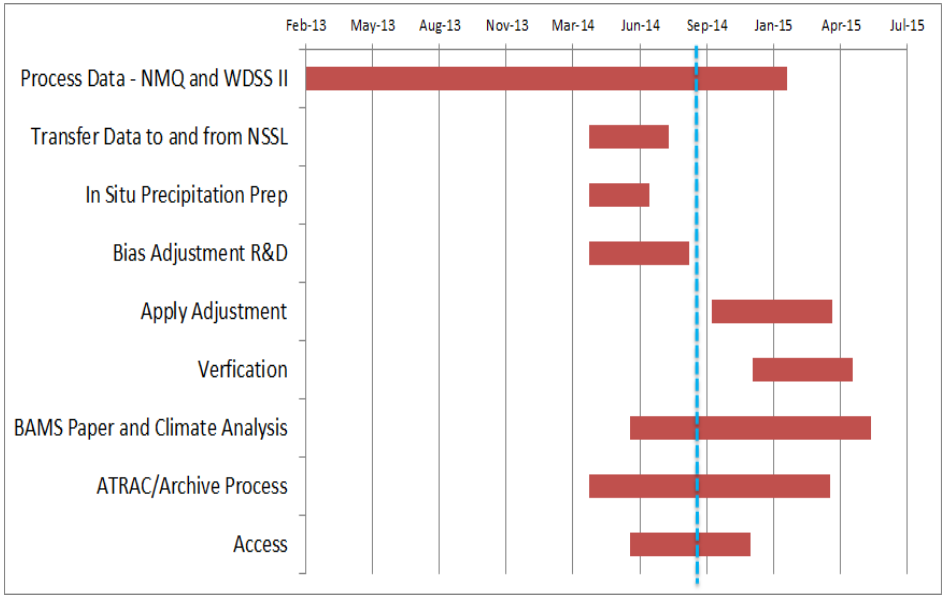
NNR – NOAA NEXRAD Reanalysis

- Assessment of Bias at Hourly for 2 months (4 years)
- Assessment of Bias at Daily scale for 4 years (2008 - 2011)
- Gauge radar merging for one year (2011)
- **Level II data for 2003 is being transferred.**

Level II data for 2005 is being transferred.

Level II data for 2012 has been transferred.

- **Ordered Level II data for 2012, 2005, 2003**
- **Processed 4 yrs of data for COOP-NNReanalysis data.**
- **Obtained COOP, HADS, and CRN data and process gauge –radar pairs for analysis.**
- Obtained COOP, HADS, and CRN data and process gauge –radar pairs for analysis.
- Testing phase of IDW scheme for multi-sensor estimation.
- Present Project Overview to Stewardship Council



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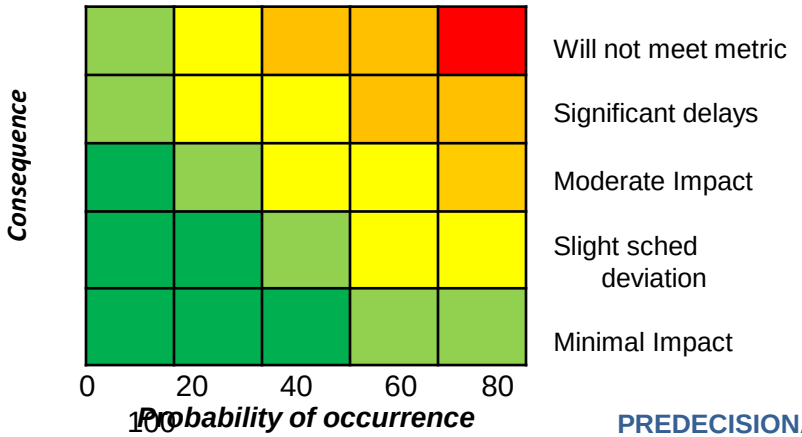

Risk and Mitigation

No Risk at this time

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CDR Program Office

ISCCP Processing @ NCDC

Project Manager:
A. Young/K. Knapp

Weekly Status Update

- Continuing to pre-process data.
- Ordering replacement data from EUMETSAT
- Sent beta data to users for feedback.
- Preparing ancillary calibration data for processing.
- Working on ISCCP Website for NCDC
- Preparing data for Beta users (preliminary output)
- Prepared space and scripts for ISCCP processing on CICS server.
- Received pre-processing software to QC input files (GEO/B1 & LEO/AVHRR)

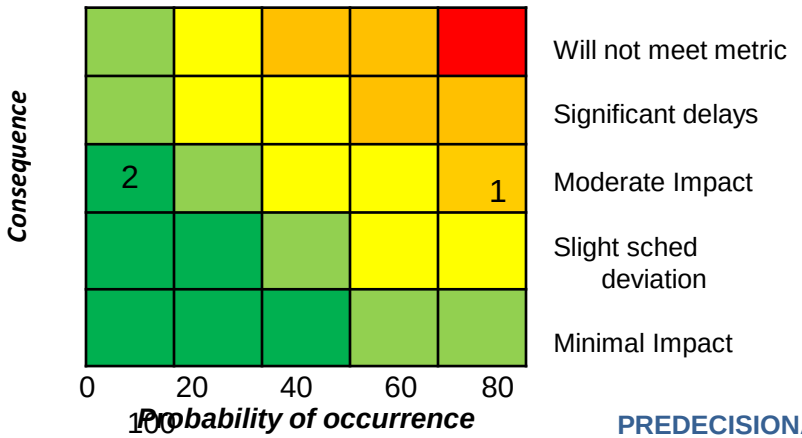
Objectives

Produce ISCCP cloud products at NCDC following IOC R2O procedures. Plan for routine updates to follow.

Schedule

• Start Date	1983? 2003? 2013?
• Begin processing	September 2014
• End processing	December 2014
• QC & Analysis	Jan-Feb 2015
• Archive	March 2015
• Routine updates start	June 2015

Risk Matrix



Risk and Mitigation

1. Delivery of software late and other delays.Raised level to moderate impact. Processing will likely start 1 month late. Impact upon completion isn't yet clear.
2. CICS server space

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CDR Program Office

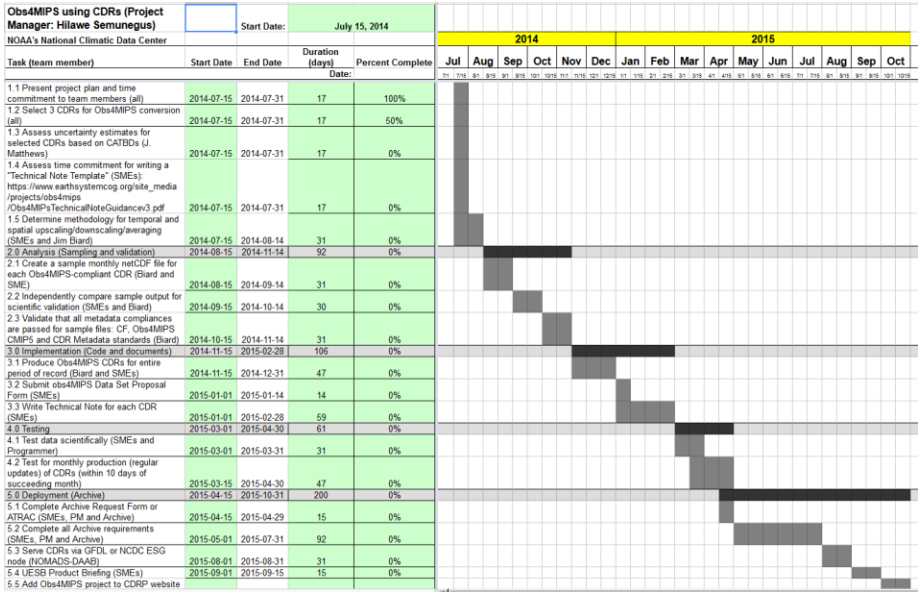
Obs4MIPS

Project Manager:
H. Semunegus

Weekly Status Update

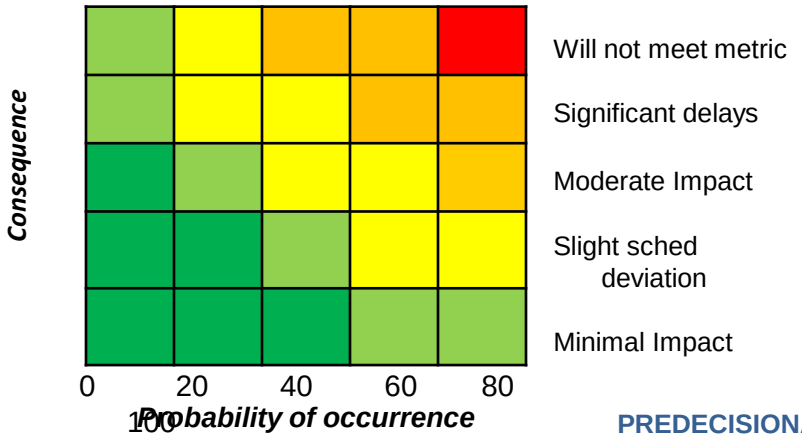
- J. Baird prototyped a conversion utility.
- Scoping out a potential third dataset for initial transition.
- Test data was converted to Obs4MIPS format.
- Planning meeting completed and schedule revised.
- Initial datasets selected for Obs4MIPS: OISST and OLR
- Lots of emails and investigations ongoing.
- Many CDRs can't work in Obs4MIPS: all FCDRs and all Mean Layer Temperatures aren't fit for this purpose.
- Kickoff meeting held 7/18
- Initial plans developed.

Initial datasets: Daily OLR, OISST, Sea Ice



Obs4MIPS using CDRs (Project Manager: Hilawe Semunegus) NOAA's National Climatic Data Center	Start Date:	July 15, 2014		
Task (team member)	Start Date	End Date	Duration (days)	Percent Complete
1.1 Present project plan and time commitment to team members (all)	2014-07-15	2014-07-31	17	100%
1.2 Select 3 CDRs for Obs4MIPS conversion (all)	2014-07-15	2014-07-31	17	50%
1.3 Assess uncertainty estimates for selected CDRs based on CATBDs (J. Matthews)	2014-07-15	2014-07-31	17	0%
1.4 Assess time commitment for writing a "Technical Note Template" (SMEs): https://www.earthsystemcog.org/site_media/projects/obs4mips/Obs4MIPsTechnicalNoteGuidancev3.pdf	2014-07-15	2014-07-31	17	0%
1.5 Determine methodology for temporal and spatial upscaling/downscaling/averaging (SMEs and Jim Biard)	2014-07-15	2014-08-14	31	0%
2.0 Analysis (Sampling and validation)	2014-08-15	2014-11-14	92	0%
2.1 Create a sample monthly netCDF file for each Obs4MIPS-compliant CDR (Biard and SME)	2014-08-15	2014-09-14	31	0%
2.2 Independently compare sample output for scientific validation (SMEs and Biard)	2014-09-15	2014-10-14	30	0%
2.3 Validate that all metadata compliances are passed for sample files: CF, Obs4MIPS CMIP5 and CDR Metadata standards (Biard)	2014-10-15	2014-11-14	31	0%
3.0 Implementation (Code and documents)	2014-11-15	2015-02-28	106	0%
3.1 Produce Obs4MIPS CDRs for entire period of record (Biard and SMEs)	2014-11-15	2014-12-31	47	0%
3.2 Submit obs4MIPS Data Set Proposal Form (SMEs)	2015-01-01	2015-01-14	14	0%
3.3 Write Technical Note for each CDR (SMEs)	2015-01-01	2015-02-28	59	0%
4.0 Testing	2015-03-01	2015-04-30	61	0%
4.1 Test data scientifically (SMEs and Programmer)	2015-03-01	2015-03-31	31	0%
4.2 Test for monthly production (regular updates) of CDRs (within 10 days of succeeding month)	2015-03-15	2015-04-30	47	0%
5.0 Deployment (Archive)	2015-04-15	2015-10-31	200	0%
5.1 Complete Archive Request Form or ATRAC (SMEs, PM and Archive)	2015-04-15	2015-04-29	15	0%
5.2 Complete all Archive requirements (SMEs, PM and Archive)	2015-05-01	2015-07-31	92	0%
5.3 Serve CDRs via GFDL or NCDC ESG node (NOMADS-DAAB)	2015-08-01	2015-08-31	31	0%
5.4 UESB Product Briefing (SMEs)	2015-09-01	2015-09-15	15	0%
5.5 Add Obs4MIPS project to CDRP website				

Risk Matrix



Risk and Mitigation

TBD

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CDR Program Office

UW HIRS Processing @ NCDC

Project Manager:
A. Young

Weekly Status Update

- Found space to temporarily store 10 TB of 10 yrs of product.
- Waiting for final code delivery from Wisconsin.
- Preparing plan for processing on CICS server.
- Working on finding space for the 10TB of input data (pixel level cloud data).

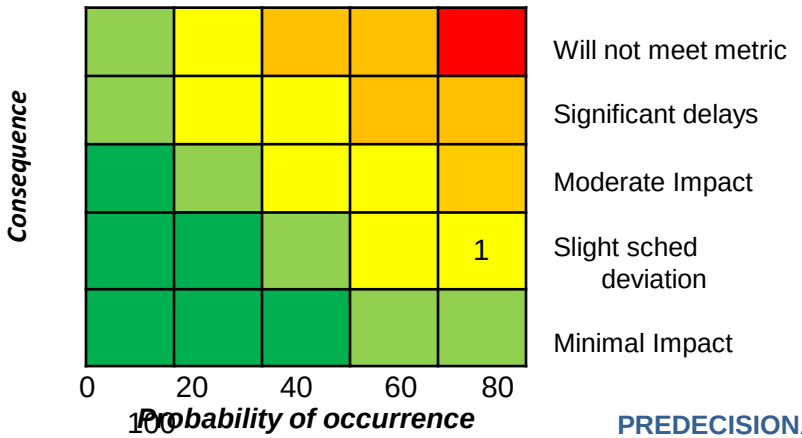
Objectives

Produce global total precipitable water and cloud top pressure estimates from HIRS data using the UW algorithm (P. Menzel).

Schedule

- Start Date TBD
- End Date TBD

Risk Matrix



Risk and Mitigation

1. Programmer was assigned to another task. Impact: Schedule may slip.

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CDR Program Office

Albedo of the Americas

Project Manager:
J. Matthews

Weekly Status Update

- Continued validation via collaboration with SAMSI (at NCSU).
- Loaned 42 TB of disk space allocation to ISCCP Project

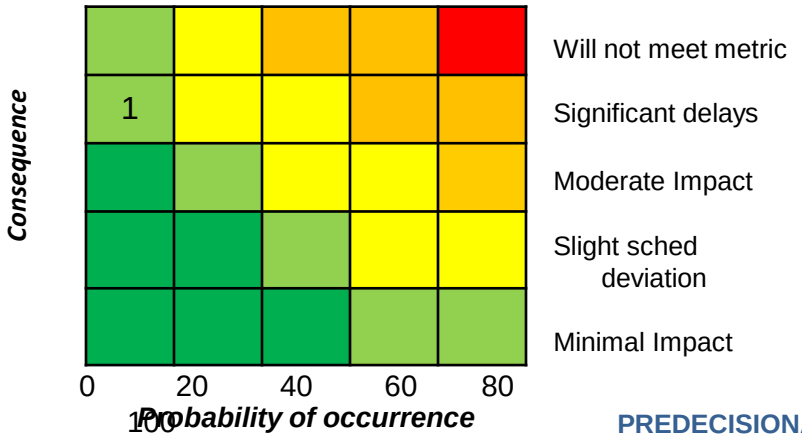
Objectives

Produce a daily land surface albedo product over North and South America from GOES-GVAR observations for 1995-2014.

Schedule

- Start Date — January 2015
- End Date — June 2016

Risk Matrix



Risk and Mitigation

1. Loaned disk space is not returned
   * Could cause delays. Unlikely since more disk space is planned.